

Notice of Allowability

Application No.

10/759,028

Applicant(s)

SHAHOIAN ET AL.

Examiner

Art Unit

Jean E. Lesperance

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the continuation application filed January 20, 2004.
2. ☒ The allowed claim(s) is/are 26-53, and renumbered as 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 4/21/04, 9/29/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413)
Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
U.S. PATENT CENTER 2600

DETAILED ACTION

1. The continuation application filed January 20, 2004 is presented for examination and claims 26-53 are pending.

Allowable Subject Matter

2. Claims 26 to 53 are allowed.
3. The following is an examiner's statement of reasons for allowance: the claimed invention is directed to a tactile interface device.

Independent claim 26 identifies a uniquely distinct feature "an actuator coupled to said housing, the actuator configured to receive a control signal, the control signal based on data values associated with at least one of an event associated with an external environment and a function of an external apparatus, the actuator configured to produce an inertial force based on the control signal, the inertial force having a first component associated with a frequency range and a second component associated with a frequency range different from the frequency range of the first component and a compliant suspension coupled to said actuator and said housing, said compliant suspension member having a compliance such that said compliant suspension is configured to magnify the first component of the inertial force, the compliant suspension configured to impart the magnified inertial force including the magnified first component of the inertial force to the housing".

Independent claim 42 identifies a uniquely distinct feature "outputting an inertial force via the actuator, the inertial force being based on the control signal, the inertial force having a first component associated with a frequency range and a second component associated with a frequency range different from the frequency range of the first component and transmitting a vibration associated with the inertial force to the housing via the compliant suspension, the compliant suspension having a compliance such that the compliant suspension is configured to magnify the first component of the inertial force".

Independent claim 46 identifies a uniquely distinct feature "an actuator coupled to said housing, said actuator configured to receive a control signal based on at least one of an event occurring in an external environment and a function associated with an external apparatus, the actuator further configured to output an inertial force based on the control signal, the inertial force having a first component associated with a frequency range and a second component associated with a frequency range different from the frequency range of the first component and a compliant member coupled to said actuator and said housing, said compliant member having a compliance such that said compliant member is configured to magnify the first component and the second component of the inertial force, the compliant member configured to impart the inertial force, including the magnified first component of the inertial force and the magnified second component of the inertial force to the housing".

Independent claim 50 identifies a uniquely distinct feature "output an inertial force via the actuator, the inertial force being based on the control signal, the inertial force

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having a first component associated with a frequency range and a second component associated with a frequency range different from the frequency range of the first component and transmit a vibration associated with the inertial force to the housing via the compliant suspension, the compliant suspension having a compliance such that the compliant suspension is configured to magnify the first component of the inertial force".

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ogata et al. (6,171,191).

The closest art, Ogata et al. as discussed above, either singularly or in combination, fails to anticipate or render obvious the above limitations obvious.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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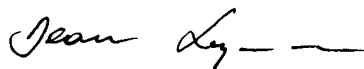
or faxed to:

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



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Date 12/4/2006



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**